

Du'Bois J. Ferguson  
Remediation Manager

Schlumberger Oilfield Service  
300 Schlumberger Drive  
Sugar Land, TX 77478  
Tel: 281-285-3692  
[DFerguson3@slb.com](mailto:DFerguson3@slb.com)

November 10, 2011

VIA FedEx Overnight

Section Chief  
Environmental Enforcement Section  
U.S. Department of Justice  
PO Box 7611  
Washington, DC 20044-7611

Craig Zeller  
Remedial Project Manager  
Superfund Division  
U.S. EPA Region 4  
61 Forsyth Street, SW  
Atlanta, GA 30303

Re: DOJ Case No. 90-11-2-696/1

Subject: October 2011 Monthly Report  
Sangamo Weston/Twelvemile Creek/Lake Hartwell Superfund Site  
Natural Resources Trustees Consent Decree

Dear Section Chief:

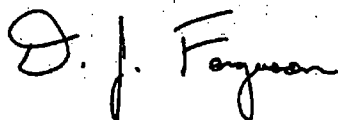
In accordance with the Consent Decree and Section XIV of the Unilateral Administrative Order for the above referenced site, Schlumberger is required to submit Progress Reports on a quarterly basis. Given the pace of activities during construction, Progress Reports were submitted on a monthly basis; however, as construction activities have been completed, this report represents the last monthly submission, and henceforth reports will be submitted on a quarterly basis in accordance with the Consent Decree and Unilateral Administrative Order.

In keeping with Paragraph 20 of the Consent Decree:

I certify that the information contained in or accompanying this submission is true, accurate and complete. This certification is based on my personal preparation, review, or analysis of the submission, and/or supervision of persons who, acting on my instructions, made the verification that the submitted information is true, accurate and complete.

If you have any questions, please do not hesitate to contact me at (281) 285-3692.

Sincerely,



DuBois J. Ferguson  
Remediation Manager



10979062

# U.S. EPA REGION IV

## SDMS

### POOR LEGIBILITY

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cc: Honorable G. Ross Anderson, Jr.  
G. Ross Anderson, Jr. Federal Building  
and United States Courthouse  
315 South McDuffie Street, 2nd Floor  
Anderson, SC 29624

Honorable William W. Wilkins  
Nexsen Pruet  
55 E. Camperdown Way  
Suite 400  
Greenville SC 29601

Leon C. Harmon Esq.  
Nexsen Pruet  
55 E. Camperdown Way  
Suite 400  
Greenville SC 29601

John Cresswell  
Assistant Director  
Division of Site Assessment and Remediation  
Bureau of Land & Waste Management  
SC Department of Health and  
Environmental Control  
2600 Bull Street  
Columbia, SC 29201

Regional Solicitor's Office  
U.S. Department of the Interior  
Attn: Harriet M. Deal  
75 Spring Street, SW Room 304  
Atlanta, GA 30303

Diane Beeman  
Ecological Services Office  
U.S. Fish and Wildlife Service  
176 Croghan Spur Road, Suite 200  
Charleston, SC 29407

Paul League  
SC Department of Natural Resources  
Office of Chief Counsel  
1000 Assembly Street  
Columbia, SC 29202

Anthony Rabern  
Georgia Department of Natural Resources  
3695 Highway 197  
Clarkesville, GA 30523

Office of the Attorney General  
Timothy J. Ritzka  
Assistant Attorney General  
40 Capitol Square SW  
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Jamie Sykes  
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4144 Russell Dam Drive  
Elberton, GA 30635

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Wyche Burgess Freeman & Parham, P.A.  
44 East Camperdown Way  
Greenville SC 29601-3591

Mr. Paul Doody  
ARCADIS  
6723 Towpath Road  
Syracuse, NY 13214-0066

Mr. Ronald Cardwell  
McNair Law Firm, P.A.  
Post Office Box 447  
Greenville, SC 29602

Ms. Celeste T. Jones  
McNair Law Firm, P.A.  
Post Office Box 11390  
Columbia, SC 29211

**October 2011 Monthly Report  
Sangamo Weston/Twelvemile Creek/Lake Hartwell Superfund Site  
Operable Unit 2**

***Activities Initiated/Completed***

- Continued/completed final grading of SMU.
- Continued screening of stockpiled materials for SMU closure.
- Continued cover system installation including Geosynthetic Clay Liner (GCL) (100% complete), LLDPE geomembrane (100% complete), Geocomposite (100% complete), soil protective cover layer (100% complete) and topsoil (95% complete).
- Initiated hydroseeding and other erosion control measures/SMU landscaping and erosion control matting activities (50% complete).
- Continued demobilization of non-essential site equipment.
- Continued survey activities.
- On October 18, 2011, SCDHEC Solid Waste Management Regional personnel were onsite for a general visit/inspection and performed a Class Three Landfill Inspection in accordance with Regulation 61-107.19, Part V. No issues were noted during the inspection. The completed Inspection Form is provided as Attachment 1.

***Results of Sampling, Tests, and Other Data***

- Sampling and analysis is being conducted relative to the water treatment system (WTS) effluent water. Results for the effluent water are attached (Attachment 2).
- Project photographs are included as Attachment 3.

***Plans, Reports, and other Deliverables***

- Analytical data related to samples collected from the WTS to assess water treatment effluent water were submitted to SCDHEC in the September Monthly Report (submitted October 14, 2011) in Attachment 2.

### ***Work Planned for Fourth Quarter 2011***

- Finish installation of SMU cover system.
- Install fencing around SMU
- Finish SMU closure.
- Complete construction demobilization.
- Prepare Final /As-Built Report and revise the Closure/Post Closure Care Plan.
- Submit Third Quarter Restoration Progress Report.

### ***Issues Encountered, Anticipated Delays, Solutions***

- Severe weather, including heavy rain and wind, impacted field operations between 10/10 and 10/14. Specifically, work was suspended on SMU liner and protective layer installation and material screening activities from 10/11-10/13.
- With the reduction of work activities, this will be the last monthly report and reporting will revert back to the required quarterly reporting schedule described in the CD.



**Attachment 1**



Class Three Landfill Inspection Form  
Regulation 61-107.19, Part V

Facility Name: 12 Mile Creek SMY Date/Time of Inspection: 18 OCT 11  
County: Pickens Permit #: \_\_\_\_\_  
Reason for Inspection: ☒ Routine; \_\_\_\_\_ Follow-up; \_\_\_\_\_ Complaint; \_\_\_\_\_ Other \_\_\_\_\_  
Current Weather Conditions: Clear Skies 75°

Previous 24-hours: Rain Y(N) - If yes, amount \_\_\_\_\_ inches; High winds Y(N)

1 - Meets or exceeds regulatory requirements; 2A - Improvement needed (minor issues exist; corrective measures recommended); 2B - Improvement needed (moderate issues exist; corrective action required and scheduled); 3 - Unacceptable (serious issues and/or recurring issues with minimal or no corrective action taken - alleged regulatory or permit condition violations have occurred - enforcement referral required); Y - Yes: Meets or exceeds regulatory requirements; N - No: Corrective measures recommended that should be fixed by the next inspection or an agreed upon completion date; NA - Not applicable; NI - Not Inspected

Procedures for Excluding Receipt of Unapproved Waste (258.20)

1. N/A Overall effectiveness of Special Waste Analysis and Implementation Plan (SWAIP)
2. Y N N A N I Trained waste screener present
3. Y N N A N I Random daily load inspections conducted and documented
4. Y N N A N I Records of unacceptable waste maintained
5. Y N N A N I Personnel training program on recognition of regulated hazardous waste and PCB waste
6. Y N N A N I Record of Notification to Department within 72-hours of hazardous or PCB waste receipt
7. Y N N A N I Unauthorized wastes removed from working face by the end of the operating day

Cover Material Requirements (258.21)

8. N/A  $\geq 6"$  soil (short-term cover)
  9. N/A Alternate Daily Cover (ADC)
  10. N/A  $\geq 6"$  soil (long-term and/or intermediate cover)
  11. Y N N A N I Adequate soil quantity available for cover
- Control of (258.21, 22, 24, 25 and 37):

12. I Blowing litter
13. I Off-site odors
14. I Disease vectors
15. I Fires/Open burning
16. I Scavenging

Access Requirements (258.25)

17. I Condition of access controls
18. I Condition of all weather roads - entrance
19. I Condition of all weather - internal haul roads

Run-on/Run-off Controls (258.26)

20. I Condition of ditches/swales
21. I Condition of berms/terraces/downchutes
22. I Condition of sedimentation ponds

Leachate Seeps (258.26 and 27)

23. N/A Leachate seep management

Liquid Restrictions (258.28)

24. F/A Free of unauthorized bulk or non-containerized liquids

Record Keeping Requirements (258.29)

25. Y N N A N I Required records are maintained in the landfill's operating record

Scale Requirements (258.30)

26. Y N N A N I Scales installed and functioning properly

Required Equipment to Operate Landfill (258.31)

27. Y N N A N I Required equipment operational - if not please provide details in comments as to the type of equipment down for repairs, impact to operations, and status on temporary replacement equipment

Certified Landfill Manager/Supervisor (258.32)

28. Y N N A N I Manager and supervisor certified by SCDHEC
29. Y N N A N I Certified manager or supervisor on-site

Leachate Collection System (258.33 and 34)

30. Y N N A N I Leachate handling agreement in place
31. I Leachate collection system management
32. I Leachate recirculation system management
33. Y N N A N I Required leachate recirculation reports/data contained in the landfill's operating record
34. I Leachate seep management
35. I Leachate collection system management

Testing of Municipal Solid Waste (MSW) Incinerator Ash (258.35)

36. Y N N A N I MSW incinerator ash management

Sign Requirements (258.36)

37. Y N N A N I Required signs posted

Condition of Monitoring Wells (258.51)

38. I Monitoring well maintenance program

Working Face/Elevation (258.87)

39. Y N N A N I Method of elevation control with benchmark

Plans and Permit (Permit)

40. Y N N A N I Operating in accordance with approved plans and general permit
41. Y N N A N I Permitted engineering drawings available
42. Y N N A N I Permitted operational plan available
43. Y N N A N I Permitted stabilization/landscaping plan available
44. Y N N A N I Permitted contingency plan available
45. Y N N A N I Permitted approved groundwater-monitoring plan available
46. Y N N A N I Permitted closure plan available
47. Y N N A N I Permitted post-closure plan available

Name of those present during the inspection: Nick Harmer / Brian Kemp

Comments: FINAL COVER OPERATIONS STILL ON GOING. Estimated time of

Inspection Item	Corrective action required	Date to be completed
	<u>Project Complete as is the first week of NOV 2011.</u>	

Additional comment page: Y(N)

Photos taken: Y(N)

The signature below certifies that the SCDHEC Inspector has personally checked each item and has answered according to the true condition existing at the time of inspection.

[Signature]  
Facility Representative

[Signature]  
SCDHEC Inspector







Infrastructure · Water · Environment · Buildings

Mr. Dale Stoudemire, Manager  
South Carolina Department of Health and Environmental Control  
Bureau of Water/Water Pollution Control Division  
Data Management Section  
2600 Bull Street  
Columbia, South Carolina 29201

**Subject:**

Schlumberger Technology Corporation, Twelvemile Creek Restoration Project  
Pickens County, South Carolina  
September 2011 Sampling Results Report

Dear Mr. Stoudemire:

On behalf of Schlumberger Technology Corporation (STC), ARCADIS is providing a summary of sampling results for the Twelvemile Creek Restoration Project in Pickens County for the month of September 2011 in accordance with the October 15, 2009 letter from Butch Swygert of South Carolina Department of Health and Environmental Control (SCDHEC) to Chris Moody of ARCADIS, as revised in the August 16, 2011 letter from Jeffrey P. deBessonnet of SCDHEC, and the March 11, 2010 SCDHEC construction operation approval memorandum. The August 16, 2011 letter modified the monitoring requirements based on reduced flow through the water treatment plant following completion of hydraulic dredging. Modifications included removing chronic whole effluent toxicity (WET) testing and converting 24-hour composite samples to grab samples.

Table 1 contains the water treatment plant flow for the month of September. This data is recorded onsite and is reviewed by a South Carolina certified water treatment plant operator. The maximum daily discharge to Twelvemile Creek for September 2011 was 0.13 million gallons per day (MGD) on September 10. The average discharge to Twelvemile Creek from the water treatment plant for the month of September was 0.06 MGD. As of August 3, two of the original six treatment trains are in use.

Table 2 contains the results of the analyses described in Table 1 of the October 15, 2009 letter that were performed on the water treatment plant effluent during the month of September 2011. All samples collected were grab samples as required by the August 16, 2011 letter. The Laboratory Services Reports from Rogers & Callcott Laboratory Services related to these tests are provided in Attachment A. The samples were analyzed for pH, temperature, total suspended solids and PCBs;

Imagine the result

**ARCADIS**

6723 Towpath Road  
P.O. Box 66  
Syracuse  
New York 13214-0066  
Tel 315.446.9120  
Fax 315.449.0017  
[www.arcadis-us.com](http://www.arcadis-us.com)

**ENVIRONMENTAL**

**Date:**

October 14, 2011

**Contact:**

Lance S. Ketcham

**Phone:**

315.671.9163

**Email:**

[lance.ketcham@arcadis-us.com](mailto:lance.ketcham@arcadis-us.com)

**Our ref.:**

MT001019

**ARCADIS**

Mr. Dale Stoudemire  
October 14, 2011

results were within the ranges outlined in the October 15, 2009 letter for the listed parameters.

Table 3 summarizes the results of the acute WET testing received from Rogers & Callcott Laboratory Services. The results from the September 2011 acute WET testing passed and the Laboratory Services Report is provided in Attachment B.

If you have any questions on the above, please feel free to contact me.

Sincerely,

ARCADIS



Lance S. Ketcham  
Principal Engineer

LSK/amm

Copies:

Melinda Vickers, SCDHEC  
Eric Kim, SCDHEC  
Du'Bois J. Ferguson, STC  
Gary Odom, STC  
J. Paul Doody, ARCADIS

**ARCADIS**

**Tables**

**Table 1. Daily Flow from Water Treatment Plant for September 2011. Twelvemile Creek Restoration Project, Pickens County**

Date	Flow, MGD
<b>Monthly Avg <sup>1</sup></b>	<b>MR</b>
<b>Daily Max <sup>1</sup></b>	<b>MR</b>
9/1/2011	0.03
9/2/2011	0.09
9/3/2011	0.11
9/4/2011	0.10
9/5/2011	0.04
9/6/2011	0.02
9/7/2011	0.05
9/8/2011	0.06
9/9/2011	0.05
9/10/2011	<b>0.13</b>
9/11/2011	0
9/12/2011	0.00
9/13/2011	0.06
9/14/2011	0.04
9/15/2011	0.08
9/16/2011	0.07
9/17/2011	0.10
9/18/2011	0
9/19/2011	0.05
9/20/2011	0.07
9/21/2011	0.11
9/22/2011	0.10
9/23/2011	0.06
9/24/2011	0.10
9/25/2011	0.08
9/26/2011	0.03
9/27/2011	0.06
9/28/2011	0.03
9/29/2011	0.04
9/30/2011	0.03
Total Discharge to Twelvemile Creek	1.8
Days per Month	30
Average Discharge	0.06

**Notes:**

1. The flow rates shown are recorded by a South Carolina certified wastewater treatment plant operator in the water treatment plant flow log maintained onsite. A flow rate of 0 MGD is shown in this table when no flow is recorded in the flow log for that day.
2. On 7/24/2011, three of the six process trains (trains D, E, and F) were taken offline and the meters removed. On 8/3/11, train A was taken offline.
3. Bolded value is the maximum daily discharge recorded.

**Superscript Notes:**

- <sup>1</sup> Discharge reporting guidelines are outlined in the 10/15/2009 letter from Butch Swygert (South Carolina Department of Health and Environmental Control) to Chris Moody (ARCADIS).

**Acronyms and Abbreviations:**

Avg - average  
Max - maximum  
MGD - million gallons per day  
MR - monitor and report

**Table 2. Weekly Effluent Sampling Result for September 2011, Twelvemile Creek Restoration Project, Pickens County**

Sample Number	Location	Sample Type	Week	Sample Date and Time	pH	Temp. (°C)	TSS (mg/L)	PCB (µg/L)						
								PCB-1018	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
Monthly Avg. <sup>1</sup>	—	—	—	—	6.0 to 8.5	—	25	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Daily Max. <sup>1</sup>	—	—	—	—	6.0 to 8.5	—	45	0.5	0.5	0.5	0.5	0.5	0.5	0.5
AD08697	WTP Effluent Discharge	G	1	9/7/2011 09:00	6.8	20.5	NA	NA	NA	NA	NA	NA	NA	NA
AD08698	WTP Effluent Discharge	G		9/7/2011 09:00	NA	NA	5.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
AD09261	WTP Effluent Discharge	G	2	9/13/2011 10:00	6.4	25.4	NA	NA	NA	NA	NA	NA	NA	NA
AD09262	WTP Effluent Discharge	G		9/13/2011 09:55	NA	NA	7.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
AD09738	WTP Effluent Discharge	G	3	9/20/2011 09:20	6.4	19.6	NA	NA	NA	NA	NA	NA	NA	NA
AD09739	WTP Effluent Discharge	G		9/20/2011 09:15	NA	NA	5.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
AD10402	WTP Effluent Discharge	G	4	9/27/2011 09:22	6.4	22.0	NA	NA	NA	NA	NA	NA	NA	NA
AD10403	WTP Effluent Discharge	G		9/27/2011 09:20	NA	NA	5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Average					6.5	21.9	5.8	-	-	-	-	-	-	-

**Notes:**

1. Sampling results compiled from Laboratory Services Reports provided by Rogers & Callout Laboratory Services and submitted in tabular form as required per the 10/15/2009 letter from Butch Swygert (South Carolina Department of Health and Environmental Control [SCDHEC]) to Chris Moody (ARCADIS) and the 3/11/2010 SCDHEC construction and operational approval memorandum.
2. The monthly average includes non-detect readings as indicated by "<" (if applicable) and assumes a value equal to the detection limit. Monthly averages are not calculated for parameters without a detected concentration (indicated by "-").

**Superscript Note:**

<sup>1</sup> Discharge reporting guidelines and limits are outlined in the 10/15/2009 letter from Butch Swygert (SDHEC) to Chris Moody (ARCADIS)

**Acronyms and Abbreviations:**

°C - degrees centigrade  
G - grab sample  
µg/L - micrograms per liter  
mg/L - milligrams per liter  
NA - not analyzed  
PCB - polychlorinated biphenyl  
Temp. - temperature

**Table 3. Whole Effluent Toxicity Result for September 2011. Twelvemile Creek Restoration Project, Pickens County**

<b>WET Analysis</b>	<b>Monthly Average</b>	<b>Daily Maximum<sup>1</sup></b>	<b>Results</b>
<i>Ceriodaphnia dubia</i> Acute WET @ ATC=35.5%	—	0 <sup>2</sup>	0

**Notes:**

1. A grab sample (AD08633) for acute WET testing was collected on 09/07/2011 as required by the 8/16/2011 letter.

**Superscript Notes:**

<sup>1</sup> Discharge reporting guidelines and limits are outlined in the 10/15/2009 letter from Butch Swygert (South Carolina Department of Health and Environmental Control) to Chris Moody (ARCADIS) as revised in the 8/16/2011 letter.

<sup>2</sup> A results of "0" indicates a passing result.

**Acronyms and Abbreviations:**

WET - whole effluent toxicity

**ARCADIS**

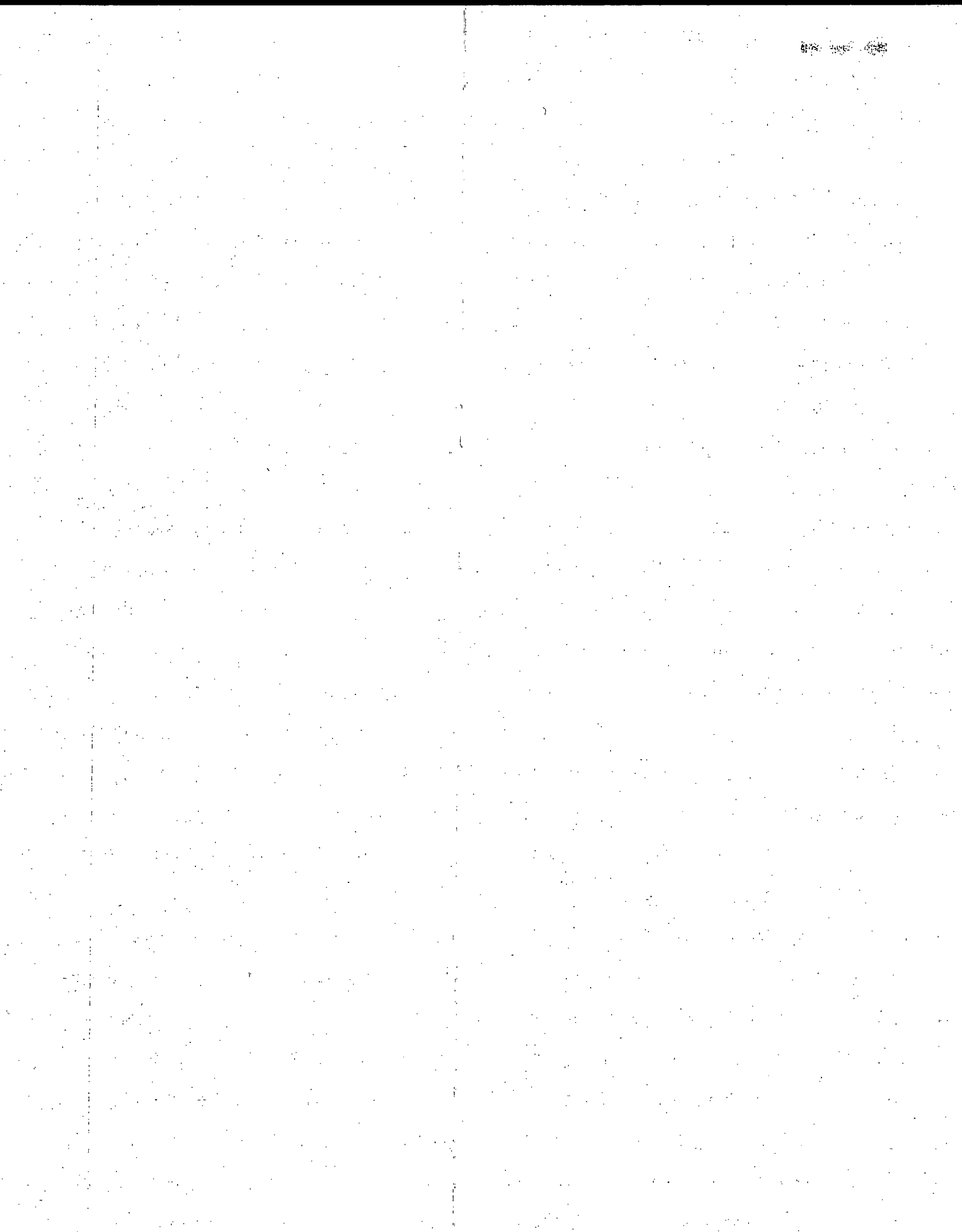
**Attachments**



**ARCADIS**

**Attachment A**

**Laboratory Services Report:  
October 15, 2009 Table 1  
Analyses**





**ROGERS & CALLCOTT  
LABORATORY SERVICES**

AN EMPLOYEE-OWNED COMPANY

P.O. Box 5655, Greenville, SC 29606

Phone: (864) 232-1556 - FAX: (864) 232-6140

***Laboratory Services Report***

**Client:** Schlumberger Technology Corporation  
Sangamo - Twelve Mile Creek Project  
Attention Gary Odom by email

**Date Received:** 09/07/2011

**Time Received:** 12:05

**Date Reported:** 09/14/2011

**South Carolina Laboratory Identification 23105**

**North Carolina Laboratory Certificate Number 27**

**NELAP Laboratory Identification E87822**

**Sample Number**

**Sample Description**



AD08697 Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab,  
collected on 09/07/2011 at 09:00



AD08698 Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab,  
collected on 09/07/2011 at 09:00

*The attached report is for the samples that were received and are referenced above. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements of the NELAC standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty available upon request.*

*We appreciate the opportunity to be of service to you. Please contact us at (864) 232-1556 should you have any questions about this report.*

**Results released by:**

*authorized signature*

**Results reviewed by:**

**Carbon copy: Email to L Ketcham S Handley A Kohler S Cary**

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD08697	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/07/2011 at 09:00						
<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Flag</u>	<u>RDL</u>	<u>Date/Time</u>	<u>Analyst</u>	<u>Method</u>
pH (Field)	6.6	pH units		0.1	09/07/2011 09:00	LRW	SM 4500HB
Temperature (Field)	20.5	degrees C		0.1	09/07/2011 09:00	LRW	SM 2550B

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD08698	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/07/2011 at 09:00						
<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Flag</u>	<u>RDL</u>	<u>Date/Time</u>	<u>Analyst</u>	<u>Method</u>
3 to 5 day turn around	Completed				09/14/2011 00:00		
Total Suspended Solids	5.4	mg/l		2.0	09/07/2011 15:35	JLA	SM 2540D
<b>Polychlorinated Biphenyls (PCBs)</b>							
PCB-1016	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
PCB-1221	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
PCB-1232	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
PCB-1242	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
PCB-1248	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
PCB-1254	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
PCB-1260	< RDL	ug/l		0.5	09/09/2011 04:54	RKH	EPA 608
2,4,5,6-Tetrachloro-m-xylene, (Surrogate)	91	%		0	09/09/2011 04:54	RKH	EPA 608
Decachlorobiphenyl, (Surrogate)	82	%		0	09/09/2011 04:54	RKH	EPA 608
Liquid-liquid Extraction Pest/PCB 608	Completed				09/07/2011 13:00	CGW	EPA 608



# ROGERS & CALLCOTT LABORATORY SERVICES

P.O. Box 5655, Greenville, SC 29608  
Phone (864) 232-1556 Fax (864) 232-6140  
Shipping Address: 426 Fairforest Way  
Greenville, SC 29607

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Client Name SCHLUMBERGER

Address \_\_\_\_\_

Report To: \_\_\_\_\_

Telephone No. \_\_\_\_\_ FAX No. \_\_\_\_\_

PO No. \_\_\_\_\_ Project No. \_\_\_\_\_

Rogers & Callcott Lab No.	Yr. <u>11</u> Date	Time	Sample Description	Total Number of Containers
AD 08698	9/7	0900	WATER TREATMENT PLANT EFF. DISCH.	2

PARAMETERS	N	N							Filtered (Yes/No)
	Y	Y							Cooled (Yes/No)
	P	G							Container Type (P/G)
	KG	2/24							Container Volume
	G	G							Sample Type (Grab/Composite)
	WW	WW							Sample Source (WW, GW, DW, Other)
	N	N							Sample Source Chlorinated (Yes/No)
	NA	NA							Lab Receipt Cl <sub>2</sub> Check <u>KRO</u>
	NA	NA							Lab Receipt pH Check <u>9.7</u>
	A	A							Preserved (Code)
TS	PCB							A-None D-NaOH G-Boric Acid B-HNO <sub>3</sub> E-HCL H-Ascorbic Acid C-H <sub>2</sub> SO <sub>4</sub> F-Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> I- _____	
COMMENTS:									
AD08697 pH 6.6 GRAB TAKEN + TEMP 20.5 READ @ 0900 ON 9/7/11 BY R/C									

SAMPLER Relinquished by (Sig.) ① <u>[Signature]</u>	Date/Time <u>9/7/11 1205</u>	Received by (Sig.) ② <u>[Signature]</u>	Date/Time <u>9.7.11 1205</u>	KNOWN HAZARDS ASSOCIATED WITH SAMPLES
Relinquished by (Sig.) ③	Date/Time	Received by (Sig.) ④	Date/Time	
Relinquished by (Sig.) ⑤	Date/Time	Received by (Sig.) ⑥	Date/Time	
Seal # _____ at'chd by _____ Recvd. Intact by _____ Seal # _____ at'chd by _____ Recvd. Intact by _____				Temperature of blank or representative sample At time of collection _____ °C At time of lab receipt <u>5.1</u> °C



**ROGERS & CALLCOTT  
LABORATORY SERVICES**

AN EMPLOYEE-OWNED COMPANY

P.O. Box 5655, Greenville, SC 29606

Phone: (864) 232-1556 - FAX: (864) 232-6140

***Laboratory Services Report***

**Client:** Schlumberger Technology Corporation  
Sangamo - Twelve Mile Creek Project  
Attention Gary Odom by email

**Date Received:** 09/13/2011

**Time Received:** 13:53

**Date Reported:** 09/15/2011

**South Carolina Laboratory Identification 23105**

**North Carolina Laboratory Certificate Number 27**

**NELAP Laboratory Identification E87822**

**Sample Number**

**Sample Description**



AD09261

Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/13/2011 at 10:00



AD09262

Schlumberger Technology TMC Water Treatment Plant Effluent Discharge composite, collected on 09/13/2011 at 09:55

*The attached report is for the samples that were received and are referenced above. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements of the NELAC standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty available upon request.*

*We appreciate the opportunity to be of service to you. Please contact us at (864) 232-1556 should you have any questions about this report.*

**Results released by:**

*Amy Z Amley*  
authorized signature

**Results reviewed by:**

*JS*

**Carbon copy: Email to L Keitcham S Handley A Kohler S Cary**

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD09261	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/13/2011 at 10:00						
<i>Parameter</i>	<i>Result</i>	<i>Unit</i>	<i>Flag</i>	<i>RDL</i>	<i>Date/Time</i>	<i>Analyst</i>	<i>Method</i>
pH (Field)	6.4	pH units		0.1	09/13/2011 10:00	LRW	SM 4500HB
Temperature (Field)	25.4	degrees C		0.1	09/13/2011 10:00	LRW	SM 2550B

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD09262	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge composite, collected on 09/13/2011 at 09:55						
<i>Parameter</i>	<i>Result</i>	<i>Unit</i>	<i>Flag</i>	<i>RDL</i>	<i>Date/Time</i>	<i>Analyst</i>	<i>Method</i>
3 to 5 day turn around	Completed				09/15/2011 00:00		
Total Suspended Solids	7.2	mg/l		2.0	09/13/2011 16:45	JLA	SM 2540D
<b>Polychlorinated Biphenyls (PCBs)</b>							
PCB-1016	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
PCB-1221	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
PCB-1232	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
PCB-1242	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
PCB-1248	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
PCB-1254	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
PCB-1260	< RDL	ug/l		0.5	09/14/2011 22:06	RKH	EPA 608
2,4,5,6-Tetrachloro-m-xylene, (Surrogate)	95	%		0	09/14/2011 22:06	RKH	EPA 608
Decachlorobiphenyl, (Surrogate)	94	%		0	09/14/2011 22:06	RKH	EPA 608
Liquid-liquid Extraction Pest/PCB 608	Completed				09/13/2011 14:30	CGW	EPA 608



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Greenville, SC 29607

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Client Name SCHLUMBERGER

Address \_\_\_\_\_

Report To: \_\_\_\_\_

Telephone No. \_\_\_\_\_ FAX No. \_\_\_\_\_

PO No. \_\_\_\_\_ Project No. \_\_\_\_\_

Rogers & Callcott Lab No.	Yr. <u>11</u> Date	Time	Sample Description
AD 0922	9/13	0955	WATER TREATMENT PLANT * EFF. DISCH.

Total Number of Containers

PARAMETERS

N	N								
Y	Y								
P	G								
4L									
G	G								
NW	NW								
N	N								
NR	NEG								
NR	7								
A	A								

TSS  
PCB

2 1 N

Filtered (Yes/No)

Cooled (Yes/No)

Container Type (P/G)

Container Volume

Sample Type (Grab/Composite)

Sample Source (WW, GW, DW, Other)

Sample Source Chlorinated (Yes/No)

Lab Receipt Cl. Check

Lab Receipt pH Check

MCAL  
9-13-11

Preserved (Code)

A-None D-MeOH G-Boric Acid  
B-HNO<sub>3</sub> E-HCL H-Ascorbic Acid  
C-H<sub>2</sub>SO<sub>4</sub> F-Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> I- \_\_\_\_\_

COMMENTS:

AD09261  
pH 6.4  
TEMP 5.4  
READ 9.1000  
ON 9/13/11 BY PTC

SAMPLER Relinquished by (Sig.) ① <u>Randy Ward</u>	Date/Time 9/13/11 1353	Received by (Sig.) ② <u>Norma Salley</u>	Date/Time 9-13-11 1353	KNOWN HAZARDS ASSOCIATED WITH SAMPLES * SUFFICIENT SAMPLE FOR FIELD DUPLICATES
Relinquished by (Sig.) ③	Date/Time	Received by (Sig.) ④	Date/Time	
Relinquished by (Sig.) ⑤	Date/Time	Received by (Sig.) ⑥	Date/Time	
Seal # _____ at'chd by _____	Recvd. Intact by _____	Seal # _____ at'chd by _____	Recvd. Intact by _____	Temperature of blank or representative sample At time of collection _____ °C At time of lab receipt <u>3.4</u> °C





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***Laboratory Services Report***

**Client:** Schlumberger Technology Corporation  
Sangamo - Twelve Mile Creek Project  
Attention Gary Odom by email

**Date Received:** 09/20/2011



**Time Received:** 12:14

**Date Reported:** 09/22/2011

*South Carolina Laboratory Identification 23105*

*North Carolina Laboratory Certificate Number 27*

*NELAP Laboratory Identification E87822*

	<b>Sample Number</b>	<b>Sample Description</b>
	AD09738	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/20/2011 at 09:20
	AD09739	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/20/2011 at 09:15

*The attached report is for the samples that were received and are referenced above. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements of the NELAC standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty available upon request.*

*We appreciate the opportunity to be of service to you. Please contact us at (864) 232-1556 should you have any questions about this report.*

Results released by:

*Amy Z Ashley*  
authorized signature

Results reviewed by:

*SE*

**Carbon copy: Email to L Ketcham S Handley A Kohler S Cary**

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD09738	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/20/2011 at 09:20						
<i>Parameter</i>	<i>Result</i>	<i>Unit</i>	<i>Flag</i>	<i>RDL</i>	<i>Date/Time</i>	<i>Analyst</i>	<i>Method</i>
pH (Field)	6.4	pH units		0.1	09/20/2011 09:20	LRW	SM 4500HB
Temperature (Field)	19.6	degrees C		0.1	09/20/2011 09:20	LRW	SM 2550B

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD09739	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/20/2011 at 09:15						
<i>Parameter</i>	<i>Result</i>	<i>Unit</i>	<i>Flag</i>	<i>RDL</i>	<i>Date/Time</i>	<i>Analyst</i>	<i>Method</i>
3 to 5 day turn around	Completed				09/22/2011 00:00		
Total Suspended Solids	5.6	mg/l		2.0	09/20/2011 15:10	JLA	SM 2540D
<b>Polychlorinated Biphenyls (PCBs)</b>							
PCB-1016	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
PCB-1221	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
PCB-1232	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
PCB-1242	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
PCB-1248	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
PCB-1254	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
PCB-1280	< RDL	ug/l		0.5	09/22/2011 00:04	RKH	EPA 608
2,4,5,6-Tetrachloro-m-xylene, (Surrogate)	90	%		0	09/22/2011 00:04	RKH	EPA 608
Decachlorobiphenyl, (Surrogate)	82	%		0	09/22/2011 00:04	RKH	EPA 608
Liquid-Liquid Extraction Pest/PCB 608	Completed				09/20/2011 14:00	CGW	EPA 608



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Shipping Address: 426 Fairforest Way  
Greenville, SC 29607

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Client Name Schlumberger

Address \_\_\_\_\_

Report To: \_\_\_\_\_

Telephone No. \_\_\_\_\_ FAX No. \_\_\_\_\_

PO No. \_\_\_\_\_ Project No. \_\_\_\_\_

Rogers & Callcott Lab No.	Yr. <u>11</u> Date	Time	Sample Description	Total Number of Containers
AD 09739	9/20	0915	WATER TREATMENT PLANT EFF. DISCH.	2

PARAMETERS	TSS PCB	N	N							Filtered (Yes/No)
		V	V							Cooled (Yes/No)
		P	G							Container Type (P/G)
		KL	2 1/2 L							Container Volume
		G	G							Sample Type (Grab/Composite)
		WW	NW							Sample Source (WW, GW, DW, Other)
		N	N							Sample Source Chlorinated (Yes/No)
		NA	NEG							Lab Receipt Cl. Check <u>mc</u>
		NA	7							Lab Receipt pH Check <u>19-21-11</u>
		A	A							Preserved (Code)
<div>A-None D-NoOH G-Boric Acid B-HNO<sub>3</sub> E-HCL H-Ascorbic Acid C-H<sub>2</sub>SO<sub>4</sub> F-Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub> I- _____</div> <p>COMMENTS:</p> <p>AD09738 pH 6.4 GRAB TAKEN + Temp 19.6°C READ @ 0920 ON 9/20/11 BY R/C</p>										

SAMPLER Relinquished by (Sig.) ① <u>Rogers &amp; Callcott</u>	Date/Time <u>9/20/11 1214</u>	Received by (Sig.) ② <u>[Signature]</u>	Date/Time <u>9.20.11 1214</u>	KNOWN HAZARDS ASSOCIATED WITH SAMPLES
Relinquished by (Sig.) ③	Date/Time	Received by (Sig.) ④	Date/Time	
Relinquished by (Sig.) ⑤	Date/Time	Received by (Sig.) ⑥	Date/Time	
Seal # _____ at'chd by _____ Recvd. Intact by _____ Seal # _____ at'chd by _____ Recvd. Intact by _____				Temperature of blank or representative sample: At time of collection _____ °C At time of lab receipt <u>3.7</u> °C



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***Laboratory Services Report***

**Client:** Schlumberger Technology Corporation  
Sangamo - Twelve Mile Creek Project  
Attention Gary Odom by email

**Date Received:** 09/27/2011

**Time Received:** 12:08

**Date Reported:** 09/29/2011

**South Carolina Laboratory Identification 23105**

**North Carolina Laboratory Certificate Number 27**

**NELAP Laboratory Identification E87822**

***Sample Number***

***Sample Description***



AD10402 Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab,  
collected on 09/27/2011 at 09:22



AD10403 Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab,  
collected on 09/27/2011 at 09:20

*The attached report is for the samples that were received and are referenced above. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements of the NELAC standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty available upon request.*

*We appreciate the opportunity to be of service to you. Please contact us at (864) 232-1556 should you have any questions about this report.*

**Results released by:**

*Amy J Ashley*  
authorized signature

**Results reviewed by:**

*JS*

**Carbon copy: Email to L Ketcham S Handley A Kohler S Cary**

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD10402	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/27/2011 at 09:22						
<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Flag</u>	<u>RDL</u>	<u>Date/Time</u>	<u>Analyst</u>	<u>Method</u>
pH (Field)	6.4	pH units		0.1	09/27/2011 09:22	LRW	SM 4500HB
Temperature (Field)	22.0	degrees C		0.1	09/27/2011 09:22	LRW	SM 2550B

<u>Sample Number</u>	<u>Sample Description, Date and Time Collected</u>						
AD10403	Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/27/2011 at 09:20						
<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Flag</u>	<u>RDL</u>	<u>Date/Time</u>	<u>Analyst</u>	<u>Method</u>
3 to 5 day turn around	Completed				09/28/2011 00:00		
Total Suspended Solids	5.0	mg/l		2.0	09/27/2011 15:50	JLA	SM 2540D
<b>Polychlorinated Biphenyls (PCBs)</b>							
PCB-1016	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
PCB-1221	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
PCB-1232	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
PCB-1242	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
PCB-1248	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
PCB-1254	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
PCB-1260	< RDL	ug/l		0.5	09/28/2011 21:16	RKH	EPA 608
2,4,5,6-Tetrachloro-m-xylene, (Surrogate)	70	%		0	09/28/2011 21:16	RKH	EPA 608
Decachlorobiphenyl, (Surrogate)	77	%		0	09/28/2011 21:16	RKH	EPA 608
Liquid-liquid Extraction Pest/PCB 608	Completed				09/27/2011 13:00	DBB	EPA 608



# ROGERS & CALLCOTT LABORATORY SERVICES

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Greenville, SC 29607

## CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Client Name Schlumberger

Address \_\_\_\_\_

Report To: \_\_\_\_\_

Telephone No. \_\_\_\_\_ FAX No. \_\_\_\_\_

PO No. \_\_\_\_\_ Project No. \_\_\_\_\_

Rogers & Callcott Lab No.	Yr. <u>4</u> Date	Time	Sample Description
AD 10403	9/27	0920	WATER TREATMENT PLANT EFF. DISCH.

Total Number of Containers	PARAMETERS	N	N						Filtered (Yes/No)
		Y	Y						Cooled (Yes/No)
		P	G						Container Type (P/G)
		1/2 G	2 1/2 L						Container Volume
		C	G						Sample Type (Grab/Composite)
		WW	NN						Sample Source (WW, GW, DW, Other)
		N	N						Sample Source Chlorinated (Yes/No)
		NK	NEG						Lab Receipt Cl <sub>2</sub> Check <u>MAC</u>
		NK	7						Lab Receipt pH Check <u>19-27-11</u>
		A	A						Preserved (Code)
TSS	PCB						A-None D-NaOH G-Boric Acid B-HNO <sub>3</sub> E-HCL H-Ascorbic Acid C-H <sub>2</sub> SO <sub>4</sub> F-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> I- _____		
COMMENTS:									

AD 10402  
pH 6.4 GRAB TAKEN +  
TEMP 22°C READ @ 0922  
ON 9/27/11 By R/C

SAMPLER Relinquished by (Sig.) ① <u>Rogers</u>	Date/Time <u>9/27/11 1208</u>	Received by (Sig.) ② <u>Rogers</u>	Date/Time <u>9.27.11 1208</u>	KNOWN HAZARDS ASSOCIATED WITH SAMPLES
Relinquished by (Sig.) ③	Date/Time	Received by (Sig.) ④	Date/Time	
Relinquished by (Sig.) ⑤	Date/Time	Received by (Sig.) ⑥	Date/Time	
Seal # _____ at'chd by _____	Recvd. Intact by _____	Seal # _____ at'chd by _____	Recvd. Intact by _____	Temperature of blank or representative sample At time of collection _____ °C At time of lab receipt <u>7.1</u> °C <u>on 11/2</u>

**ARCADIS**

**Attachment B**

**Laboratory Services Report:  
Whole Effluent Toxicity Testing**



**ROGERS & CALLCOTT  
LABORATORY SERVICES**

AN EMPLOYEE-OWNED COMPANY

P.O. Box 5655, Greenville, SC 29606  
Phone: (864) 232-1556 - FAX: (864) 232-6140

***Laboratory Services Report***

**Client:** Schlumberger Technology Corporation  
Sangamo - Twelve Mile Creek Project  
Attention Gary Odom by email

**Date Received:** 09/07/2011

**Time Received:** 13:45

**Date Reported:** 09/15/2011

*South Carolina Laboratory Identification 23105*

*North Carolina Laboratory Certificate Number 27*

*NELAP Laboratory Identification E87822*

***Sample Number***

***Sample Description***



AD08633 Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab,  
collected on 09/07/2011 at 09:00

*The attached report is for the samples that were received and are referenced above. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements of the NELAC standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty available upon request.*

*We appreciate the opportunity to be of service to you. Please contact us at (864) 232-1556 should you have any questions about this report.*

**Results released by:**

*Amy J Ashley*  
authorized signature

**Results reviewed by:**

*JS*

**Carbon copy: Email to L Ketcham S Handley A Kohler S Cary**



**Sample Number**

AD08633

**Sample Description, Date and Time Collected**

Schlumberger Technology TMC Water Treatment Plant Effluent Discharge grab, collected on 09/07/2011 at 09:00

**Parameter****Result****Unit****Flag****RDL****Date/Time****Analyst****Method**

Subcontracted Sample Analysis

Completed

09/15/2011 00:00

Analysis comment for Subcontracted Sample Analysis: See enclosed subcontract report which includes a total of 4 pages for Acute Toxicity from ETT Environmental Inc.



P.O. Box 18414, Greenville, SC 29606

(864) 877-6942 • Fax (864) 877-8938

4 Craftsman Court, Greer, SC 29650

## 48 Hour Acute Pass/Fail Test

### EPA-821-R-02-012 Method 2002

Test Species:

*Ceriodaphnia dubia*

Client: SCHLUMBERGER

Facility: EFFLUENT

NPDES #: SC

Test Date:

07-Sep-11

Laboratory ID#: T38439

Rogers & Calcott#: AD08633

Test Reviewed and Approved By:

Robert W. Kelley, Ph.D.

Laboratory Manager



Certification #E87819

Test results presented in this report conform to all requirements of

NELAC, conducted under NELAC Certification Number E87819

Florida Dept. of Health. Included results pertain only to provided samples.

SCDHEC Certification #23104

NCDENR Certification # 022



## DMR Attachment for Pass/Fail Whole Effluent Toxicity Test Results

TWELVE MILE CREEK RESTORATION PROJECT Permit number SC  
FINAL LIMITS 04/01/2010- Parameter TGA3B

Discharge number  
MLOC-1 ATC=35.50% effluent

Monitoring period From			To		
Year	Month	Day	Year	Month	Day
11	9	01	11	9	30

### Mortality Data - Acute and Chronic Tests

### Reproduction Data-Chronic Tests Only

Date	07-Sep-11	Group	# Adults	# Dead	Pass/Fail	Average	Variance	Pass/Fail
Lab ID	23104	Control	20	0	Pass			
		Test	20	0				

### Mortality Data - Acute and Chronic Tests

### Reproduction Data-Chronic Tests Only

Date		Group	# Adults	# Dead	Pass/Fail	Average	Variance	Pass/Fail
Lab ID		Control						
		Test						

### Mortality Data - Acute and Chronic Tests

### Reproduction Data-Chronic Tests Only

Date		Group	# Adults	# Dead	Pass/Fail	Average	Variance	Pass/Fail
Lab ID		Control						
		Test						

### Mortality Data - Acute and Chronic Tests

### Reproduction Data-Chronic Tests Only

Date		Group	# Adults	# Dead	Pass/Fail	Average	Variance	Pass/Fail
Lab ID		Control						
		Test						

### Mortality Data - Acute and Chronic Tests

### Reproduction Data-Chronic Tests Only

Date		Group	# Adults	# Dead	Pass/Fail	Average	Variance	Pass/Fail
Lab ID		Control						
		Test						

### Mortality Data - Acute and Chronic Tests

### Reproduction Data-Chronic Tests Only

Date		Group	# Adults	# Dead	Pass/Fail	Average	Variance	Pass/Fail
Lab ID		Control						
		Test						

Signature of Principal Executive Officer or Authorized Agent

Name/Title of Principal Executive Officer (typed or printed)

DHEC 3420 (8/05)

		Control Survival and Reproduction by Test Day									
source	rep	1	2	3	4	5	6	7	8	Total	
CC9 8-28	A		0							0	
X3 8-28	A		0							0	
N1 8-1	A		0							0	
Random	A		0							0	
	A		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	D		0							0	
	D		0							0	
	D		0							0	Mean
	D		0							0	0.0

		35.5 % Effluent Survival and Reproduction by Test Day									
		1	2	3	4	5	6	7	8	Total	
CC9 8-28	A		0							0	
X3 8-28	A		0							0	
N1 8-1	A		0							0	
Random	A		0							0	
	A		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	B		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	C		0							0	
	D		0							0	
	D		0							0	
	D		0							0	Mean
	D		0							0	0.0

										09-Sep-11	
										04:04 PM	JS
Old temp. °C										25.4	

D=Dead N/A=Lost or not used

\*\*\*\*\*  
11:38 AM

Batch	T38439
Batch	SCHLUMBERGER
Batch	EFFLUENT
Batch	SC
Batch	0
Batch	8
Batch	07-Sep-11
Batch	1515
Batch	VC
Batch	Ceriodaphnia dubia
Batch	40792
Batch	BATCH 2
Batch	SCAPP
Batch	MHSF
Batch	%
Batch	35.5
Batch	
Batch	30 ml
Batch	15 ml
Batch	1
Batch	16lt/8dk
Batch	24.8
Batch	0.05 ml
Batch	0.05 ml
Batch	EPA 821-R-02-013:1002

Comments
NEO. FED TIME- 1300



**Attachment 3**

**October Monthly Construction Photo Log**



**View of protective cover layer looking south.**



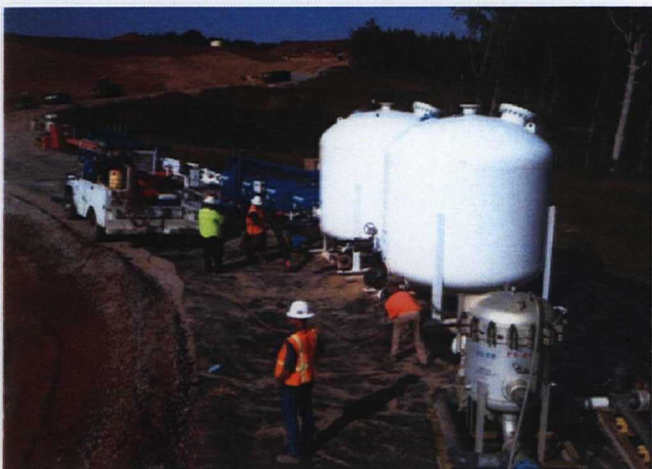
**View of GCL and LLDPE liner placement at the southern end of the SMU.**



**View of terrace flap installation along the east side of the SMU.**



**View of LLDPE liner & protective cover placement looking south.**



**Relocating Water Treatment System.**



**Protective cover screening operations in the former Water Treatment System area.**